

WATANABE et al.  
Serial No. Unknown

**REMARKS**

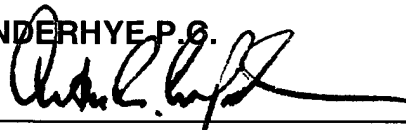
Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

The above amendments are made to place the claims in a more traditional format.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: \_\_\_\_\_



Arthur R. Crawford

Reg. No. 25,327

ARC:Imy

1100 North Glebe Road, 8th Floor  
Arlington, VA 22201-4714  
Telephone: (703) 816-4000  
Facsimile: (703) 816-4100

TELEPHONE (703) 816-4000

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

3. (Amended) The organic-inorganic composite graded material of claim 1 [or 2], wherein the metallic compound is a metal-oxide-containing compound.

4. (Amended) The organic-inorganic composite graded material of claim 1 [or 2], wherein the metallic compound is a metal-nitride-containing compound in which the metallic compound is bonded to the organic polymer compound through a metal-oxide-containing compound.

5. (Amended) The organic-inorganic composite graded material of [any one of claims 1 to 4] claim 1, which has a thickness of 5  $\mu\text{m}$  or less.

6. (Amended) The organic-inorganic composite graded material of claim 3 [or 5], wherein the composite in which the organic polymer compound and the metallic compound are bonded to each other is a hydrolysis product from a mixture of the organic polymer compound having a molecule containing a metal-containing group capable of bonding to a metal oxide by hydrolysis with a metal compound capable of forming a metal oxide by hydrolysis.

7. (Amended) The organic-inorganic composite graded material of claim 4 [or 5], wherein the composite in which the organic polymer compound and the metallic compound are bonded to each other is a hydrolysis product from a mixture of the organic polymer compound having a molecule containing a metal-containing group capable of bonding to a metal nitride polymer by hydrolysis with a metal nitride polymer.

8. (Amended) The organic-inorganic composite graded material of claim 6 [or 7], wherein the organic polymer compound having a molecule containing a metal-

containing group capable of bonding to a metal oxide or a metal nitride polymer by hydrolysis is a copolymer or polycondensate from a monomer having the metal-containing group and a monomer containing no metal.

11. (Amended) The organic-inorganic composite graded material of [any one of claims 1 to 10] claim 1, which is a film-shaped product formed on an organic substrate, the film-shaped product substantially having a surface formed of a component from the organic polymer compound, the surface being in contact with the organic substrate, and an open surface formed of a component from the metallic compound.

12. (Amended) A process for the production of the organic-inorganic composite graded material recited in [any one of claims 1 to 4] claim 1, which comprises preparing a coating solution which is a mixture of (A) an organic polymer compound having a molecule containing a metal-containing group capable of bonding to a metal oxide or metal nitride polymer by hydrolysis with (B) (a) a metal compound capable of forming a metal oxide by hydrolysis or (b) a metal nitride polymer, or preparing a hydrolysis product of the mixture, forming a coating film made of the above coating solution on a substrate made of an organic material and drying the coating film under heat.

14. (Amended) The process of claim 12 [or 13], wherein the organic polymer compound, as Component (A), having a molecule containing a metal-containing group capable of bonding to a metal oxide or a metal nitride polymer by hydrolysis is a copolymer or polycondensate from a monomer having the metal-containing group and a monomer containing no metal.

15. (Amended) The process of [any one of claims 12 to 14] claim 12, wherein the organic polymer compound, as Component (A), having a molecule containing a metal-containing group capable of bonding to a metal oxide or a metal nitride polymer by hydrolysis is a copolymer from a monomer having an ethylenically unsaturated group and a monomer containing an ethylenically unsaturated group and the metal-containing group.

16. (Amended) The process of [any one of claims 12 to 15] claim 12, wherein the metal compound, as Component (B) (a), capable of forming a metal oxide by hydrolysis is a metal alkoxide.

17. (Amended) A coating agent made of the organic-inorganic composite graded material of [any one of claims 1 to 11] claim 1 for forming a coating film on a substrate.

19. (Amended) The coating agent of claim 17 [or 18], which is for use for forming a coating film on an organic substrate.

20. (Amended) The coating agent of claim 17 [or 18], which is for use as an adhesive between an organic material and an inorganic or metallic material.

21. (Amended) The coating agent of claim 17 [or 18], which is for use for forming an intermediate film to be interposed between an organic substrate and a coating layer containing at least an inorganic or metallic material.

26. (Amended) The coating agent of claim 17 [or 18], which is for use for forming an intermediate film to be interposed between a metallic substrate having an organic coating film on a surface and a photocatalytic material layer.

27. (Amended) The coating agent of claim 22 [or 26], wherein the photocatalytic material layer is a titanium dioxide coating film.

28. (Amended) A substrate using the organic-inorganic composite graded material recited in [any one of claims 1 to 11] claim 1.

32. (Amended) An organic-inorganic adhesive material using the organic-inorganic composite graded material of [any one of claims 1 to 11] claim 1 as an adhesive.

33. (Amended) An article having the organic-inorganic composite graded material of [any one of claims 1 to 11] claim 1 interposed as an intermediate film and having a coating layer containing at least an inorganic or metallic material.